

## **REMARKS**

### **I. Status of Claims**

Claims 22, 25, 28-33, 36-41, and 43-53 are pending in the application, with claims 22, 43, and 51 being independent. Claims 22, 25, 29-31, 33, 36, 40-41, 43, 45-49, and 51 are currently amended. Claims 23-24, 26-27, 34-35, and 42 were previously canceled. Claims 51-53 were withdrawn by the Examiner. Support for the additional claim language can at least be found on page 7, lines 14-18 of the description, as well as in the figures.

Claims 22, 25, 28-29, 31-33, 37-39, 43-48, and 50 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Castro (USPUB 2002/0077702) ("Castro").

Claims 30, 36, and 49 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Castro.

Claims 40-41 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Castro as applied to claim 22 above, and further in view of Senegas (USP 6,761,720).

The Applicant respectfully requests reconsideration of these rejections in view of the foregoing amendments and the following remarks.

### **II. Applicant's Statement of Substance of Examiner Interview**

In compliance with M.P.E.P. 713.04, the Applicant provides this Statement of Substance of Interview concerning the interview conducted December 29, 2009 with Examiner Fisher and Applicant's representative Daniel Shanley.

(A) Exhibits. N/A.

(B) Claims. 22, 43, and 51.

(C) Prior art. Castro.

(D) Amendments. Discussed possibly amending claims to recite that anterior portion outwardly projects from support surface of posterior portion.

(E) Principal arguments of Applicant. Castro neither anticipates nor renders obvious the inventions of claims 22, 43, and 51.

(F) Other matters. N/A.

(G) Results. Agreement was reached that if method claim was amended to include structural limitations of claims 22 and 43, the election-restriction requirement would be withdrawn. Also, Examiner agreed that if Applicant amended the claims to recite that anterior portion outwardly

projects from the support surface of the posterior portion, this amendment would most likely overcome rejections of record; however, indication of allowable subject matter would depend upon a further search and/or consideration.

### **III. Election-Restriction Requirement**

Method claim 51 has been amended to include structural limitations generally tracking those recited in apparatus claims 22 and 43. Thus, as discussed in the personal interview, the Applicant respectfully requests reconsideration of this election-restriction requirement and examination of claims 51-53.

### **IV. 35 USC 112, second paragraph, Rejections**

Claims 29, 30, 31, 33, 36, 40, 41, 45, 46, 47, 48, and 49 stand rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which they regard as the invention.

The Applicant respectfully submits that the claims have been amended to obviate any perceived ambiguity. Thus, the Applicant respectfully requests withdrawal of these rejections.

### **V. Pending Claims**

Independent claims 22 and 43 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Castro.

The Applicant respectfully submits that claims 22 and 43 are patentable over Castro at least because they recite an intervertebral support comprising, *inter alia*, "...wherein the anterior portion has a planar face, and upper and lower faces configured to respectively receive underlying and overlying laminae of two adjacent vertebrae for restoring an anatomical intervertebral spacing...", "...wherein the posterior portion comprising a support surface configured to abut against the laminae, and the support surface having at least a height greater than a height of the planar face so as to form a retaining member for preventing the support from migrating towards the anterior portion of the spine by pressing against the laminae...", and *"...wherein the anterior portion extends outwardly from the support surface of the posterior*

*portion so that a shoulder is formed between the planar face of the anterior portion and the support surface of the posterior portion ....*<sup>1</sup> (emphasis added)

The Applicant respectfully submits that the intervertebral support according to certain embodiments of the present invention is arranged to be positioned in the specific space between the two laminae and comprises a retaining member that enables a surgeon *to bring the support point to the posterior arc where the load is most important* (See paragraph [0010] of the application as published) and *to provide better damping of the forces acting at this level and good relief for the inter-vertebral disk* (See paragraph [0013] of the application as published).

Furthermore, this specific positioning between the two laminae and the retaining member creates two rotation points: 1) one between the superior laminae and the top of the anterior portion, and 2) one between the inferior laminae and the bottom of the anterior portion. These two points permit improved articular mobility with full control over flexing, extension, and rotation of the spine (See paragraph [0007] of the application as published).

It also has to be noted that the surgical operation to position the intervertebral support according to certain embodiments of the present invention is simple and not too invasive (See paragraphs [0008] and [0016] of the application as published).

Thus, certain embodiments of the present invention provide for an intervertebral support that improves relief for the inter-vertebral disk, provides improved articular mobility, restores and maintains satisfactory disk spacing, and that can be easily positioned by a surgeon during surgery.

The Office Action alleges that Castro discloses an intervertebral support equivalent to the intervertebral support of the inventions of claims 22 and 43. More specifically, the Office Action considers that the intervertebral support described by Castro comprises elements (e.g., 64a-64d, 62, and 72a-72d) that equate to the anterior and posterior portions of the intervertebral support according to the inventions of claims 22 and 43. It is respectfully submitted that the Office Action is misinterpreting Castro and/or certain embodiments of the present invention. Indeed, an analysis of Castro reveals that Castro discloses an intervertebral support that is suitable for being positioned *in the space between the underlying and overlying disks of two*

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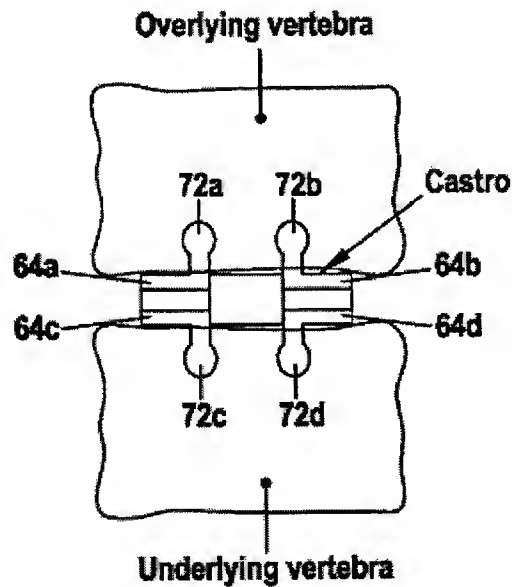
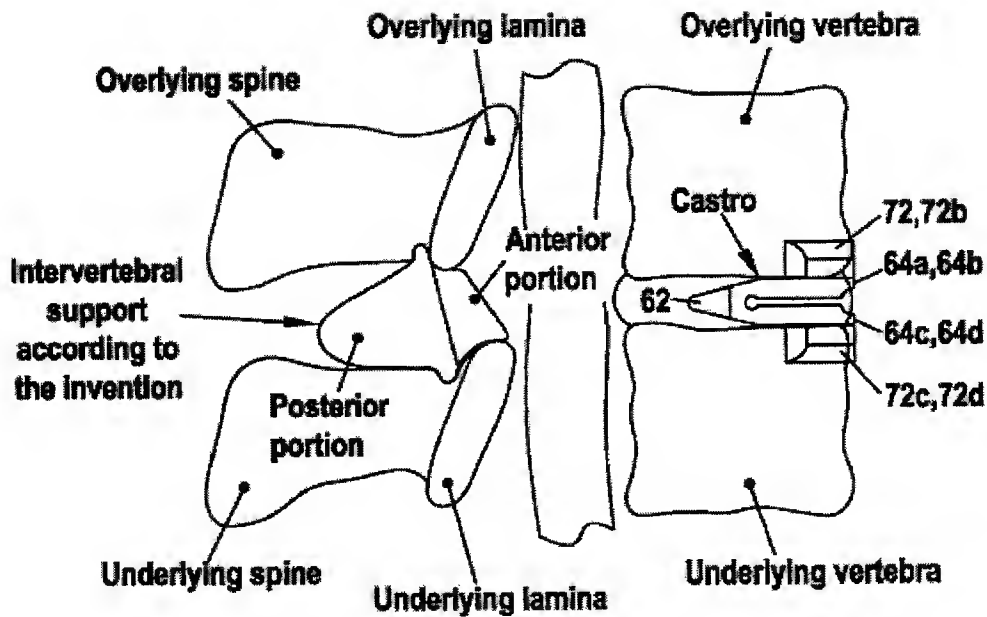
<sup>1</sup> It is respectfully submitted that claim 51, which general tracks claims 22 and 43, is patentable over Castro for similar reasons.

*adjacent vertebrae*. On the contrary, the intervertebral support according to certain embodiments of the present invention is suitable for being positioned *in the space between the underlying and overlying laminae of two adjacent vertebrae*.

That said, there are several key differences in terms of functional characteristics and effects. The Applicant respectfully submits that the drawings reproduced herein below should enable the Examiner to clearly distinguish the two different spaces where these two different intervertebral supports are positioned. Regarding these drawings, it can be seen that elements 64a to 64d of Castro cannot be positioned in the space between the underlying and overlying laminae of two adjacent vertebrae since these elements are front elements that are arranged opposite to element 62 (which is in the space between the underlying and overlying disks of two adjacent vertebrae).

For these reasons, elements 64a to 64d of Castro cannot be considered as similar or equivalent to the anterior portion recited in the inventions of claims 22 and 43. Further, still regarding these drawings, it is clearly apparent that element 62 of Castro is positioned in the space between the underlying and overlying disks of two adjacent vertebrae, but not between the underlying and overlying laminae of two adjacent vertebrae as required by the Applicant's claims.

Also, for the same reasons, elements 72a to 72d of element 62 of Castro cannot be considered as similar or equivalent to the retaining means of the posterior portion according to certain embodiments of the present invention since those elements are tails that are designed to be introduced in the bones of the vertebrae (e.g., in a manner similar to that of driving a nail).



In addition, Castro and certain embodiments of the present invention function differently. For example, Castro is not "suitable for being positioned in the space between the underlying and overlying laminae of two adjacent vertebrae" as recited in, and required by,

claim 22, for example.

In addition, without waiving any argument, and to advance prosecution, claims 22 and 43 are currently amended to recite “...*wherein the anterior portion extends outwardly from the support surface of the posterior portion so that a shoulder is formed between the planar face of the anterior portion and the support surface of the posterior portion* ....” This aspect of certain embodiments of the present invention is simply not described in Castro. As shown in FIG. 5 of Castro, the entire front face of Castro is planar. That is, there is no shoulder formed, for example, between the alleged planar face 64a and the face of element 72a (i.e., which the Examiner is attempting to equate to the Applicant’s support surface which forms a retaining member) of Castro.<sup>2</sup>

Still further, the Applicant respectfully submits that the position of the intervertebral implant according to Castro is dependant on the anatomical form of the disks which is completely different from the anatomical form of the laminae. In other words, if the surgeon wants to place the intervertebral implant according to Castro in the space between the underlying and overlying laminae of two adjacent vertebrae the surgeon would have to crop the spine. By cropping the spine, the implant would not be correctly positioned between the two adjacent laminae.

Moreover, even if the surgeon would attempt to adapt the elements 64a to 64d of the intervertebral support according to Castro and manage to position it between the two adjacent laminae, the implant would come in contact with the anterior portion of the spine, and eventually touch the medullar canal. In such a case, a patient could suffer from partial or total paralysis. Thus, it would be necessary to adapt the elements 72a to 72d to correctly prevent the intervertebral support from migrating towards the anterior portion of the spines by pressing against the laminae.

Having said that, the retaining member of the intervertebral support according to certain embodiments of the present invention functions to prevent the intervertebral support from migrating towards the anterior portion of the spines by pressing against the laminae. To provide such a function with Castro, one having ordinary skill in the art would have to significantly modify the elements 62 and 72a to 72d of Castro to obtain a support surface in abutment against

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<sup>2</sup> Again, as pointed out in the interview, the Office Action is contending that that the planar face of FIG. 5 is the anterior portion, and the V-shaped portion proximate reference numeral 60 is the posterior portion.

the laminae suitable to prevent the support from migrating towards the anterior portion of the spine by pressing against the laminae. More precisely, one of ordinary skill in the art would have to add two transverse projections so as to create a planar face in abutment against the laminae to prevent the support from migrating towards the anterior portion of the spine. Even if such a modification were possible, which is so admitted, there is no reason provided in the cited references for making such a modification.

Thus, the Applicant respectfully submits that it also would not have been obvious to modify Castro in the manner as claimed.

As discussed in *KSR Int'l Co. v. Teleflex, et al.*, No. 04-1350, (U.S. Apr. 30, 2007), the Applicant respectfully submits that it remains necessary to identify the reason why a person of ordinary skill in the art would have been prompted to combine alleged prior art elements in the manner as claimed by the Applicant. Obviousness cannot be sustained on mere conclusory statements.

Accordingly, the Applicant respectfully submits that, for at least these reasons, claims 22, 43, and 51 and their dependent claims are patentable over the cited references.

## **VI. Conclusion**

The Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. **The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.**

Respectfully submitted,

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